

Summary

It's possible to configure user group to receive the notification message (e-mail) "Zabbix database is down." but this information is not enough to take actions.

Acceptance criteria

Zabbix Server should provide actual error message received from database engine when sending the database down message. It will greatly help with troubleshooting. Currently it just sends message "Zabbix database is down.", which is not enough.

1. All database engines must be supported;
2. The information in the message should be presented in a easy to read format.

Design Decisions made

1. Proposed error message format: Database <DB Type> at "<DB connection string from config file>" connection error: <exception message>.
2. Testing - check message on each supported database.

Notification e-mail message body

The flowing parameters are used inside Zabbix server to connect to DB:

- DB Host IP of DB
- DB User user name used to connect to DB
- DB Password password used to connect to DB
- DB Name DB name
- DB Schema Used only for IBM DB2 and PostgreSQL.
- DB Socket Path to MySQL socket.
- DB Port Database port when not using local socket. Ignored for SQLite.

The notification message indicating that Zabbix DB is down should contain only information significant for identifying the cause of the issue. A combination of parameters used to connect to DB and an error message from DBMS should be used for notification.

Currently there already exists a mechanism for adding an DB error message to log file. It consist of Zabbix error message part and the other part from DBMS error message. For example:

```
[Z3001] connection to database '<DB name>' failed: [2002] Can't connect to local MySQL server through socket '/var/run/mysqld/mysqld.sock' (2)
```

```
|-----Zabbix part-----|-----DBMS error message-----|
```

Potentially the example form above could be used in the notification e-mail message body. Also some other options for the message body:

- Database <DB Type> at "<DB connection string from config file>" connection error: <exception message>.
- Database <DB Name> on <DB Host> connection field: <error message from DBMS>.
- Database <DB Name> connection field. Address: <DB Host>, user: <DB User>. Error: <error message from DBMS>.
- Database <DB Name> connection field. Address: <DB Host>:<DB Port>, socket:<DB Socket>, user: <DB User>, DB type: <DB Type>. Error: <error message from DBMS>.

A combination or variations of the options above can be selected for the final decision. Also more options can be suggested. This topic is open for discussion.

Use cases

Case 1: <goal or what needs to be achieved from user point of view>

Scenario (how to achieve it?):

1. Precondition 1: Zabbix configured with database (should be tested for each database)
 - i. MySQL
 - ii. Postgres
 - iii. Oracle
 - iv. DB2
2. Start Zabbix
3. Administration
 - i. Media types - setup Email so that you will receive it
 - ii. Users - add media Email to user which is in Zabbix administrator user group
4. Stop DB engine that Zabbix is using
5. Expected result:
 - i. Receive e-mail:
 1. Subject: "Zabbix database <DB name> is down."
 2. Message body: the one selected from "Notification e-mail message body" section

What's affected

- Server

Server

Extend `am_queue_watchdog_alerts()` functionality by adding DB type, DB name and error message received from database engine to the content of the notification message.

Documentation changes

- What's new in 4.0
- Zabbix Manual
- Upgrade notes